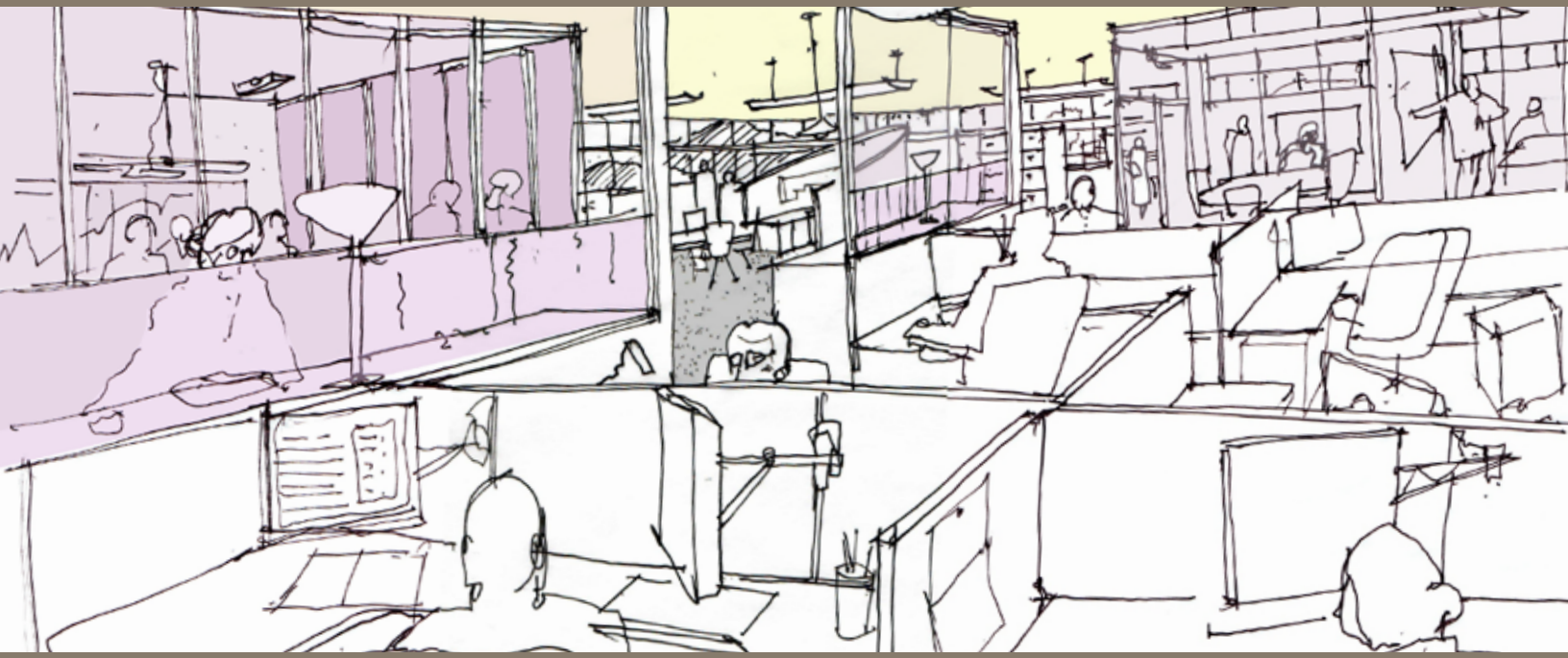

INTERIOR BASICS

U.S. General Services Administration
Public Buildings Service
Office of Applied Science
1800 F Street, NW
Washington, DC 20405

For more information:
www.gsa.gov/workplace

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This publication is part of a series of Guides that GSA has prepared to improve all aspects of the workplaces we provide our customers. Our emphasis has been upon developing methods to understand the organizational drivers of change and to enrich traditional programming. With the Requirements Development Process, GSA developed processes to engage workers at a level appropriate to their organization's need to better understand the nature of their work. We have found that these methods and the resulting insights cannot but improve the quality of the workplace provided.

Design as a Tool of Business

This publication is a next step. It is a series of suggestions to our customers as they engage with us and with designers to improve the effectiveness of their workplace. In many instances in the past, workplaces have been "laid out" with an eye to minimizing real estate costs rather than optimizing worker effectiveness. The need for the investment in workplace was rarely raised, nor was the idea that design is a powerful tool of business.

What makes that particularly wrong-headed is that the salary and benefit cost of people in an office building are typically 10 to 12 times greater than the cost of the building's real estate and utility costs. Employee salary and benefits comprise 82% of an organization's budget according to expert Michael Brill. And while pre-design and design typically cost less than one percent of life cycle costs, decisions made during the design stage not only influence the staff's job satisfaction and ability to do their job for the lifetime of the building (and Government owned buildings are typically specified to last 100 years, while leased facilities are very often renewed!), but they also drive up to 80% of the facility's life cycle operations and maintenance costs. Workplace has become too expensive and affects the environment too much to treat it with the cavalier attitude that it has been dealt with in the past three and a half decades since the "cubicle" was introduced as a one size-fits-all solution to the office.

Beyond any tangible, monetary benefits—and they are real—workplace design choices directly affect worker behavior, including attraction and retention as well as job satisfaction. Perhaps a 2006 survey of 2000 professional workers by Gensler makes the point best: 50% of those surveyed would work an extra hour a day if they just had a nicer place to work! Now that's a business case!

Unfortunately, the intervention of design expertise may continue to be less available than desirable for many clients. To improve that situation, this publication is intended to raise customer and project manager awareness about simple design issues that can significantly improve worker satisfaction with their workplace. Correlation between satisfaction with the office environment and job satisfaction has been documented. The look and feel of workspace conveys important messages to both Federal workers and to their customers: They should embody the goals of their organization. These messages can be obscured by inept or inappropriate interior design.

Improving Design Insights

This brief pamphlet is not a Standard. It is Guidance. It is meant to offer insight for the process of co-creation which is essential to design in the Twenty-first century. It is dedicated to the proposition that design is about solving problems. It is creative without being mystical. It represents good value and makes good sense. It is cost effective. To that end, it is not about how to make "high design," though in the hands of a gifted designer that may be the result.

This publication is about improving design insights to raise the general level of the Federal workplace.

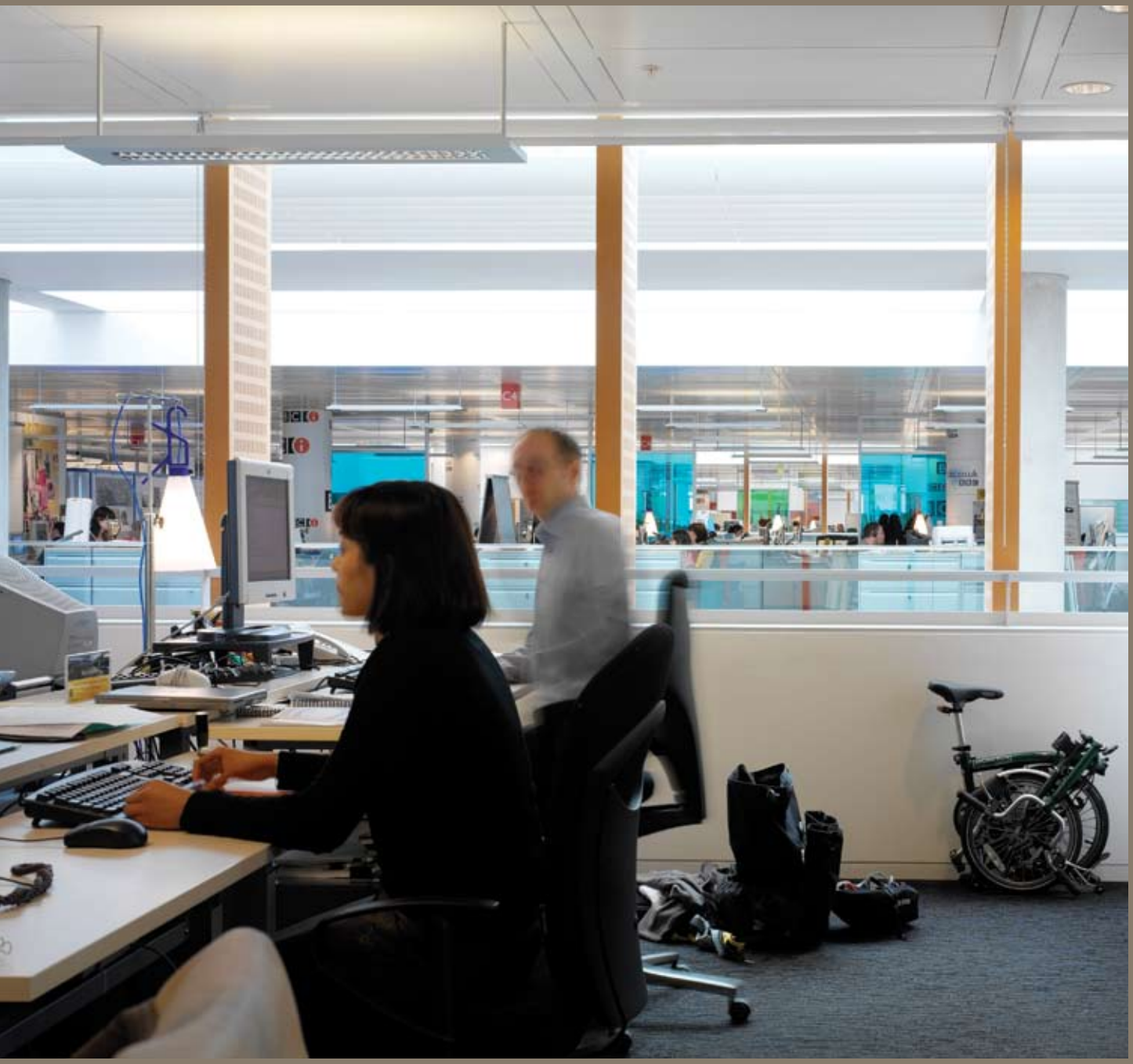
GSA has identified seven “Hallmarks of a Productive Workplace” listed in Appendix 1. Below are some important characteristics derived from the Hallmarks that are the focus of this publication.

HALLMARKS OF A PRODUCTIVE WORKPLACE

- **SENSE OF PLACE**
- **SPATIAL EQUITY**
- **TECHNOLOGY CONNECTIVITY**
- **FLEXIBLE INTERIORS**
- **FUNCTIONALITY**
- **COLLABORATIVE SPACES**
- **HEALTHFULNESS**

Though specific clients may alter the priority of the Hallmarks for their organization s work, nothing in this document contradicts the Hallmarks. In fact, the purpose of this publication is to identify features which, when properly considered, reinforce the Hallmark s expression and effectiveness.

One of the main points of these guidelines is to provide a framework for making decisions and setting design priorities. The following list represents two sets of priorities. The first set of priorities has to do with pragmatic, functional concerns. The second list is primarily aesthetic but supports pragmatic, cultural, and branding issues as well.



ASK YOUR DESIGNER OR SPACE PLANNER ABOUT THESE ISSUES

The following design considerations are listed in order of importance. This is a big picture method of setting priorities.

Health

No design decision should negatively affect human health. For instance, the elimination of natural light. If for security or other reasons workers are without natural light, adjustment such as high quality artificial light or a break or conference area with plenty of light and view should be provided. Another example is the introduction of materials which off-gas unacceptably or, are potential carcinogens. Does the proposed design address these issues well?

Sustainability

Designing to reduce energy consumption, conserve natural resources and minimize waste approaches health issues in its level of importance. Creating an interior that is flexible enough and pleasant enough to inspire modification rather than a complete re-do in future years is an interior which is inherently more sustainable than one which is not easily adapted.

Examples of Health

- **Low volatile organic com pounds (VOC) paints are an important consideration.**
- **Lighting that causes glare can be harmful or tiring to one's eyes.**

An Example of Sustainability

Linoleum is naturally anti microbial and biodegradable, whereas sheet vinyl requires stripping and polishing for maintenance. Not only should the material itself be evaluated for environmental responsibility, but the cleaning products used for maintenance also need to be factored in.

Durability

Is the material or construction detail well thought-out in terms of ease of maintenance and strength of materials for longevity? For instance, upholstery material is usually specified in terms of "rubs," the higher numbers being more durable. Is the element strong enough to support its function without undue maintenance, replacement or repair?

An Example of Durability

Wood floors may look nice but are difficult to maintain in heavily trafficked areas such as reception spaces and lobbies.

Cost

The cost must be appropriate to the budget and be a wise use of the client's money. It should provide high value. A truly brilliant design is one that solves problems and creates the brand that supports the organization in an economical manner. This requires cleverness, which is where talent and experience come in. Almost any design professional can do something that looks good with an unlimited budget. To do the same within budget is the mark of excellence, but the client needs to be open to re-examining preconceptions, allowing the creativity of the designer to formulate solutions which may be unexpected.

An Example of Cost

Spending the lion's share of the budget on expensive reception chairs while the staff is assigned out moded, non ergonomic chairs may not be the best use of a limited budget.

An Example of Image and Branding

An expensive "high design" conference table may not be appropriate for a non profit agency funded by tax dol lars, unless the mission of the organization requires this high design image.

Image and Branding

Because design communicates many things, it is important that the materials, color, and details send the appropriate message. They speak to issues such as appropriate expenditure, degree of modesty or opulence, and customer focus.

An Example of Consistency

It is important to develop a decision matrix or set of rules which guide the selection of all materials, finishes, and furnishings.

Consistency

It is important that a design be consistent in use of materials and the quality of those materials. Strive for a limited but consistent use of materials and finishes. It is important to make decisions that support the organization's mission. Mahogany desks, for instance, for an IT organization, seems an inappropriate choice that does not reinforce the high tech image of IT excellence.

An Example of Capacity

Pantries and break rooms are often designed without much consideration for appropriate storage, trash, and recycling. This results in ad hoc solutions which look bad and crowd the facility, and create anything but the desired oasis.

Capacity

Capacity is critically important. If there is not enough space for an intended use, this can create insurmountable problems. Corollary: Question whether elements are really necessary. GSA, in it's Requirements' Development pilot projects, for instance, has found that filing cabinets may be far less necessary than in the past due to digital communication. Workstations with flipper bins often shelter snacks rather than work-related information while negatively affecting light penetration.

Aesthetic Issues

Developing a design vocabulary involves the manipulation of the following seven elements. As a general rule, these are listed from most important to least important in terms of the design's success. Notice that color and pattern are last as they are often used to mask deficiencies in the other five elements, although they can be extremely important when used correctly by a skilled designer.

An Example of Volume

Circulation, function, furniture placement and light source should be addressed before determining the width, length, and height of a space, if possible.

Volume

The proportions of the empty space is the first critical element. Determine the proper width, length, height and other variables to maximize comfort, circulation and capacity. Remember: "bowling alleys" often increase the amount of space dedicated to circulation.

An Example of Form + Shape

A chair may be attractive but if the form does not support seated activities comfortably, the design falls short. Nobody appreciates a "design state ment" if their back hurts.

Form + Shape

The form and shape of the object are much more important than color and pattern. Form and shape is typically directly related as much to function and utility as it is to beauty.

An Example of Contrast

Elements in a space can be emphasized through high or low contrast, popping out or receding into the background as necessary. Level changes, for one, can be emphasized through high contrast to avoid trips and other accidents.

Contrast

Select an appropriate neutral and study the design using only shades of that neutral to see what you want to emphasize in terms of the contrast of dark and light. As a general rule, all designs should have some white (or off-white) and some black (or dark neutral) to create contrast.

An Example of Material + Authenticity

Plastic laminate wood grain, slate textured ceramic tile, and other mass produced faux finishes are easily seen for the frauds they are. The word "tacky" comes to mind...

Material + Authenticity

By and large, a material should never pretend to be something that it is not. If the material is synthetic, it should honestly be represented as such rather than trying to look like another material.

An Example of Texture + Finish

Often shiny finishes create an ostentatious effect and give the appearance of trying to make a space look expensive and "pre cious." Matte, low sheen, and brushed finishes have a quieter, more sophisticated aesthetic. Any design element that draws imme diate attention to itself should be questioned.

Texture + Finish

Aesthetic appeal is as much about feel as it is about the look of an element. Texture and finish allow the feel or grip of a surface support comfort and/or safety. Texture and finish, such as nubby upholstery or semi-gloss paint, also manipulate light to create shadows, sheen, or reflection, all of which can provide visual interest. As a rule, highly polished finishes are rarely appropriate from a maintenance (hardware), safety (floors), or image (ostentatiousness) point of view.

An Example of Color

More than any design element, color goes in and out of fash ion. It is important that color either be used conservatively or used in such a way it can be easily changed. This is why a timeless backdrop of a neutrals will allow spaces to be easily upgraded or refreshed over time. Remember mauve?
On the other hand when color is used purposely, it can remind the occupant of the effect of sunlight in a windowless space as in the illustration opposite, on the upper left of the page.

Color

Because color is inexpensive it can be used, and often is, at the expense of appropriate materials and detailing. In other words, it can be used as a design gimmick that is one of many elements meant to support the design overall. Color should be used wisely in terms of making undesirable elements "disappear" and making accented objects pop. Also, remember that all things have color, even glass.

But the effect of color, it's ability to relieve stress, calm or excite, is beyond question. Unfortunately, individuals often choose color due to personal preference. No matter how good an individual's sense of color, a perfect sense of "color pitch" is probably rarer than perfect pitch in music. At the very least, large scale color sample boards (at least 1 meter by 1 meter)—not color chips—should be viewed in the space with the type of lighting to be used along with samples of as many of the adjacent materials as possible. This requirement should be included in specifications.

There needs to be strong reasons behind color choices, and this is where professional direction can help. Guidelines for picking color:

- Warm color tends to advance, cool color tends to retreat.
- A little goes a long way.
- Saturated color in the office is best added to walls opposite windows. Dark color on walls adjacent to windows usually increases the effect of glare, unless there is low light outside and the design intent is to frame a view. Light transmission is aided by off-white walls perpendicular to windows.
- Corridors and break rooms which are occupied intermittently and for short periods of time can provide a "jolt" of color that might be less acceptable if it were constant. Think of these bursts of color throughout the day as "psychic coffee breaks."

For more thoughts on color, please see www.gsa.gov/workplace solutions.

Pattern

Pattern, like color, is often used as a gimmick to take attention away from bad detailing and poor quality materials. It should be used carefully and to support the overall design. Avoid geometrics and focus on clear, two to three color patterns with a moderate repeat.

An Example of Pattern

The contract market has developed patterned uphol stery fabrics and carpets that have resulted in a "contract" aesthetic and a barrage of unsophisticated product. If you can visualize it in a cheap motel, it is best that you avoid it.

EXIT

Critical List

Key elements, which are critical to the success or failure of the design are listed here in order of importance of their effects on the occupant.

- CEILINGS
- FLOORS
- LIGHTING
- WALLS AND BASE
- FINISHES AND COLOR PALETTE
- FREE STANDING FURNITURE
- SYSTEM FURNITURE
- INDIVIDUAL WORKSPACES
- PRIVATE OFFICES
- MILLWORK
- ART AND ACCESSORIES
- EQUIPMENT

The "dead give away" of poor design is the disorganized, haphazard organization of ceiling elements. Ceilings are important because they are so visible. No other feature of the space can be "taken in" at a glance. It is a first impression that is lasting. Unfortunately, owners rarely look at ceiling plans, believing that "the layout" is the only thing important. But the layout is not perceivable at a glance the way a ceiling is.

ITEM 1: CEILINGS

- All ceiling elements such as lighting, exit signs, diffusers, speakers, return air, and ceiling tile all need to be distributed appropriately and in an organized manner.
- In most cases, the ceiling in a workplace should be white (at least 85 percent light reflective) and the fixtures should be either white or silver metal. The reasoning behind this is that if there are dark elements to the ceiling, glare can develop as the eye tries to adjust between light and dark. Direct/indirect fixtures have become popular largely because they light the ceiling and reduce the resulting glare. The exception to this general principle is specialty lighting such as decorative chandeliers for example.
- Select ceiling tile (if it is used), based on the desired acoustic performance and with the lowest profile metal grid. Usually, it is well worth the small cost increment to obtain a ceiling that is at least 80% sound absorptive, as opposed to the typical 60% sound absorptive, in open office areas where noise level control is important. 2x2 tiles are aesthetically preferable to 2x4 tiles.
- Drywall ceilings or large suspended panels are appropriate in areas where higher quality finishes are desired such as reception areas or conference rooms, but remember: Drywall is NOT sound absorptive.
- Always ensure coordination of reflected ceiling plans with the engineers to control for conflicts above the ceiling such as duct work, cable trays, and sprinkler supply. Lack of co-ordination is the root of many unsatisfactory results.

Watch for This!

DO NOT SUFFER FROM POOR COORDINATION, IT IS A TREAT ABLE CONDITION

Designer A developed a ceiling plan for the new space he created for his tenant. Once it was laid out, he did not coordinate the plan with the engineer to make sure fixtures did not conflict with ducts and that smoke detectors, diffus ers, etc. were logically laid out. As a result, many changes were made in the field to avoid conflicts and other elements, placed at the dis cretion of the engineers, seemed haphazard and random.

The primary design consideration for floors is to match the durability of the material with the anticipated amount of wear. Beyond this, keeping the treatment simple, eschewing the introduction of new material without a good reason is key to a good design. In addition, it should be remembered that floors and ceilings are the most important factors in acoustics. Walls, especially partition walls count for little in office acoustics.

ITEM 2: FLOORS

- Limit the number of floor treatments to two or three materials for the entire space. Typically, this means selecting a general use treatment such as carpet and one or two specialty treatments.
- Poor transitions from one material to another is a tell tale sign of bad design. Make sure the transition falls either beneath a door or has a logical alignment. Make sure the detail is not visually aggressive, calling attention to itself.
- Do not depend on carpet for a primary design element. Too often, designers overuse color and pattern with what is essentially a functional, synthetic material. Start with a multiple, neutral yarn with a great texture that doesn't show soiling.
- Maintenance should drive all floor treatment decisions. Carpet tiles, for instance, allow soiled or worn areas to be replaced. Wood floors are notoriously high maintenance, but may be worth it in ceremonial spaces.
- Carpet borders are generally a bad idea. Too often they are designed to follow the irregularities of the walls rather than creating a simple, geometric shape to organize the room. They can also be fussy and make a space appear smaller.

Watch for This!

AVOIDING DESIGNING WITH CARPET UNLESS YOU ARE A PRO

Like many young designers, Designer D was mesmerized with the opportunities carpet provided for design. Multiple patterns, textures, and border possibilities allowed her to be very creative. Unfortunately, bad commercial and hospitality design has become synonymous with overly zealous carpet design. Carpet should be conservatively selected and only on the merit of supporting the overall design, not hogging the lime light. Its almost better to look boring than to look like a casino. Unless you are one.

Well-designed lighting cannot only help create a comfortable and inviting workplace with appealing ambient quality, but it can save energy as well. Because good lighting design involves a delicate balance of natural and artificial sources that take optical requirements for task and general lighting into account, it is wise to consider working with a lighting designer to ensure the appropriate light levels while eliminating unnecessary energy consumption.

ITEM 3: LIGHTING

- Reducing harshness and glare is very important. Open work areas are often more pleasingly lit from sources that are mostly indirect, reflecting light off of the ceiling, together with adjustable task light at the desk.
- Shallow raking light, such as provided by wall sconces or certain accent lighting can emphasize the imperfections of a wall.
- The most important and most neglected principle of artificial lighting is to light surface, not volume. What does this mean? Light is for seeing and all spaces don't require a huge amount of light. Walkways, for instance, require relatively little. While 50 foot-candles may be highly desirable for a work surface, that does NOT mean that every surface in the space needs to be lit to this high level. Not only is it very energy inefficient, but it is very fatiguing for the eye. It is also very unnatural. Nature includes a variety of light levels even on a sunny day.
- From an energy consumption point of view, try to match the appropriate amount of light with efficient sources. In some cases, automatic controls can reduce consumption during peak daylighting hours or when the space is not occupied.
- Approximately fifteen feet from the window wall is adequately lighted without artificial light, even on a cloudy day. Therefore the artificial lighting in this portion of the workplace should, at a minimum, be on a different circuit, preferably on a light sensor. The energy savings possible are huge.

Watch for This!

ALWAYS TAKE CONTEXT INTO ACCOUNT

Designer G found a sleek pendent fixture that she believed would look great over the round conference table. The client agreed that, indeed, it looked great even though it was a bit expensive. In the end, the designer convinced the client that the expenditure would be worth it. When installed, the fixture hung only 12 inches above the table. Nobody had checked the ceiling height with the minimum drop of the fixture.

Walls are the primary element involved in planning an interior: they can be inflexible, block light, impede communication, and utilize large amounts of natural resources. Careful consideration of wall function, placement, composition, and attributes is one of the most important design decisions.

ITEM 4: WALLS AND BASE

- Premanufactured walls can be movable and reusable, eliminating drywall consumption and construction waste over time. Make sure that they are properly sound-proofed where desired, with above ceiling baffling and insulation, and well-gasketed doors. Avoid penetrations and make sure the top and bottom of the partition are well sealed. At a minimum, include insulation above the ceiling at the wall location.
- Walls should be located and designed in ways to ensure all employees receive natural light. Consider glazing in the wall or partition so that the wall is eliminated visually all together. Glass with various levels of opacity allow light penetration where desired. Question whether a wall is needed at all and whether its inclusion best serves the organization's purposes.
- Carefully determine the exact function of the wall: Code-required fire separation, visual privacy, audio privacy, or status. Design only for the attributes needed.
- Walls are about creating purposeful barriers. Consider this function carefully in terms of whether or not it hinders communication, contains disruption, or fosters concentration.
- If solid walls are required, consider how they may be used to support other functions Consider using their surfaces to mount white boards, signage or art work.

Watch for This!

CONSIDER ACOUSTICS PART I

Client X felt that all senior analysts needed to have offices because of the need to concen trate on highly technical data. At the same time, Client X was very cost conscious and did not want to pay for the extra cost of acoustic considerations such as building the walls from slab to slab and providing appropriate insulation. The client's rationale was that these people were quiet anyway. As it turns out, the senior analysts also liked to talk on the phone to clients and those conversations could be heard by everyone.

Unless careful detailing and appropriate materials are provided, bases should be viewed as primarily functional and less of a design statement. They should never draw attention to themselves. Bases are what protect walls from vacuum chafing, scuffs, and other abrasive encounters.

Watch for This!

CARPET BASE IS NEVER CLEVER

While admittedly carpet base is extremely durable, it has its share of negative attributes. It shows the most varied wear level between the floor and the base, assuming that they are the same carpet (contrasting base would be the ultimate design sin). Finished edges are typically either bound or edged with plas tic trim, both of which look like low quality solutions. However, it may be its association with spaces such as multiplex cine mas, car rental offices, discount shoe stores, etc. that is most objectionable.

- Carpet base is never good. Unless it is properly recessed, its exposed edge is never successfully finished.
- Transitions for base must be carefully resolved to avoid awkward conditions. As a rule, the base should maintain the same height throughout the space despite variations in floor materials.
- Never transition bases on an outside corner or on the same plane. Look for simple transition points.
- Recessed base, while expensive, provides a cleaner look with less transition challenges than a surface applied base and should be considered if the budget is allocated for a high end space.
- Vinyl base telegraphs even minor flaws in drywall. Wall conditions must be specified and inspected prior to installation. Vinyl base with a cover profile should be avoided.
- Four (4) inch base should “disappear.” Two (2) inch base, because of its low profile, can be specified in contrasting neutrals. Colored base is almost never appropriate.
- Tile and stone provide the most durable bases that won’t “ugly out” like vinyl base, which is likely to be bumped by cleaning equipment.
- Never use a base that is inferior to the floor treatment.

Generally, all finishes should be selected for appropriate durability and low maintenance, as well as aesthetic preference.

ITEM 5: FINISHES AND COLOR PALETTE

Watch for This!

CONSIDER ACOUSTICS PART II

Client X insisted on polished concrete floors, a drywall ceil ing, and full height glazing for the major conference rooms, despite the concerns of the designer who warned that it would be an acoustic nightmare. It was.

- Be sure to plan for and detail finish transitions. For instance, always transition wall finishes at an inside corner. Changing materials at an outside edge or corner results in awkward transitions and problematic details.
- Most finishes should be standard. Minimize custom or specialty finishes, and avoid the use of exotic or heavily rich materials. Speciality finishes should be used strategically and sparingly, and reserved for more public-facing spaces.
- Be conscious of how finishes affect the acoustics and lighting of a space. A predominance of hard surfaces can result in acoustic issues. Specific lighting solutions usually require ceilings to have a high degree of reflectivity. One of the most effective ways to keep noise down, or at least to help provide speech privacy is to use a ceiling that is better than 80% absorptive. Sound masking will further promote speech privacy in a modern open environment. These spaces are often too quiet and conversations can be heard and understood at great distances. GSA has found dissatisfaction with open office acoustics to be the major occupant complaint.
- Select environmentally responsible materials, such as low VOC paints. Use wood veneers that are part of a reforestation or replenishing program, and carpet that has a buy back policy (see GSA's PBS-100 for additional information on carpet).
- Avoid saturating the palette with trendy colors: use them in select locations. Bold, bright and trendy colors should be integrated into the project through mediums which are easily replaced, such as paint.

EXIT

Furniture selection should be integrated and complimentary to the overall architectural design of the space. Furniture should be considered an investment and selected for its design, durability, application, re-usability, minimal maintenance and functionality.

ITEM 6: FREE STANDING FURNITURE

- Minimize the use of custom furniture. Use products that are standard in order to simplify future reorders, installation, and replacement.
- Typically, the furniture style should be understated and support the overall design of the space. New furniture that references a historic style or an exaggerated "modern" gesture should be avoided. Look for tailored, classic lines or classic styles. That will extend the usable life of the product.
- Select upholsteries that are durable and that meet code requirements. They should also have an interesting texture or variation of color. Any pattern or figure should come directly from the weave and not from a printing process.
- For the most part, use commercial grade products for commercial spaces. These products are designed for the wear and tear of high uses spaces.
- Ergonomics should be a priority. Provide task seating with adjustable components so individuals can tailor them to fit their bodies. Furniture that is well designed can create such a desirable look and feel for the individual environment that a decrease in space may be easier for an employee to accept. Since space (and employees) are so much more expensive than furniture, buying higher quality/well designed pieces that occupy less space may well be more cost effective than large, un-ergonomic and ill-considered pieces.

Watch for This!

BEWARE THE PATTERN

Designer B selected a camel back sofa with rolled arms to grace the reception area. Because the budget was mod est, the sofa was purchased from a lower end furniture company with all the hallmarks of budget furniture: awkward proportions, non descript legs, poor uphol stery detailing, and patterned synthetic fabric. It's always bet ter to purchase the best quality option within the budget, rather than try to give an impression of luxury that the budget cannot deliver.

Systems furniture should be selected for specific performance criteria and not based on the recommendation of a vendor or on "attractiveness" alone. Prior to approaching vendors, the client and designer should determine the intent, the degree of flexibility, and all other characteristics necessary. GSA's Requirement's Development Process can greatly expedite this important step. Furniture selection is an activity that can be greatly enhanced by the neutral advice of an experienced design professional—even if they did not do the space design. Remember, the vendor's job is to sell furniture.

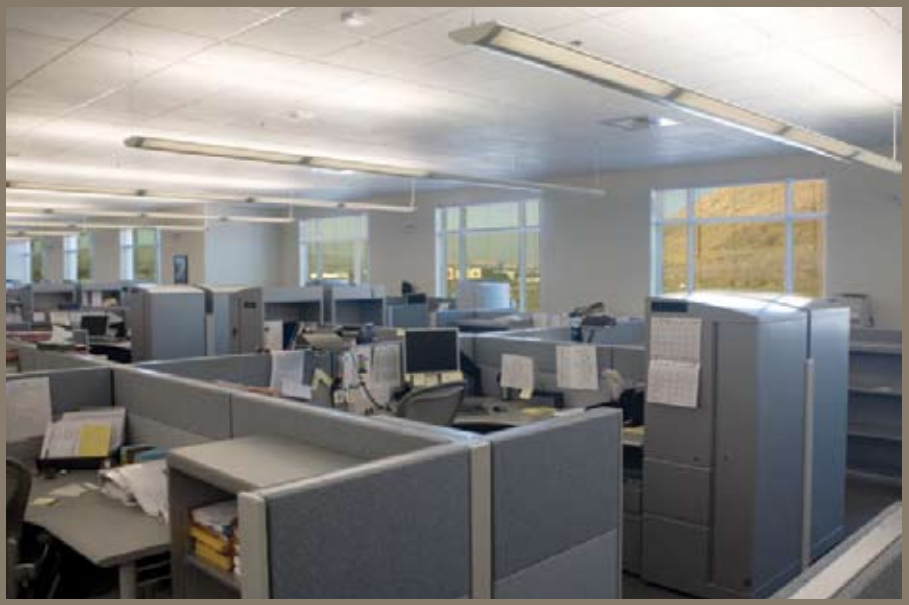
ITEM 7: SYSTEM FURNITURE

- The manufacture of systems furniture utilizes large amounts of natural resources, particularly when used in traditional 'cube farm' scenarios. Determine what product is actually needed to support work processes, understanding that less product is better from environmental, inventory control, and simplified planning points of view.
- Determine the degree of flexibility necessary and don't purchase more than the client needs. Fewer dependencies in terms of structural support, modularity, and technical interface result in lower cost re-configuration.
- Consider the degree of personal control. More freestanding, movable options in a task environment allow individuals or small groups to modify their space to meet specific needs.
- If frequent re-configuration is necessary, avoid numerous finishes and limit the (preferably modular) kit of parts to a reasonable inventory.

Watch for This!

TOTAL FLEXIBILITY IS EXPENSIVE

Designer X challenges con ventional systems and looks for off module, freestand ing, uncomplicated solutions that allow rapid change, by either the users or unskilled labor. Remember that even the pyramids are flexible if you have enough manpower to move each stone. With systems furniture, remember that just because something can move doesn't mean it isn't labor intensive, cumbersome, or overly complicated to do so.



Individual workstations are often selected to support the individual exclusively, without considering balancing the support requirements of the group or the enterprise. In other words, the preference of the user may inhibit the overall group if it stifles communication or collaborative behaviors (if these behaviors are considered necessary).

ITEM 8: INDIVIDUAL WORKSPACES

Watch for This!

PERSONAL RESPONSIBILITY

Traditional high partitioned cubicles do few things well: They don't control noise, they give a false sense of acoustic privacy, they inhibit quick communication, and discourage interaction. By trying to do everything, they don't do one thing well except screen visual distractions. Most of what cubicles try to control for can actually be accomplished via responsible behaviors that are addressed by office protocols which the staff determines.

- Users typically request the maximum degree of privacy whether or not it is necessary. Often the key to controlling noise disruption is making people responsible for their personal behaviors rather than erecting barriers to block it. GSA's research has found time after time that barriers which block the sight of other workers actually raise the noise level in the work space. Partitions which won't totally block light, view, and air circulation are incapable of absorbing this higher level of noise. High partitions create a false sense of privacy.
- Communication may be faster among small groups when immediate eye contact is available. In large areas of open space, consider maintaining eye-sight among small groups or teams if appropriate to the process.
- Before maximizing storage, determine whether or not storage is actually needed, or if it simply encourages employees to be pack rats. Also, logically locate storage to provide adequate knee-space and easy access. Assess whether or not storage really needs to be closed or secured; whether it can be outside the workstation. Are personal training manuals really necessary at the desk, or can there be a "communal" library that would save both space and paper?
- Maximum worksurface is most likely important but don't let this drive the size of the station (or office). In general, a computer surface and side surface should suffice. Consider monitors hung on articulated arms to allow more work surface.
- Power and data is extremely important but may be limited to electrical distribution as phones and computers go wireless. Consider how power and data is most easily distributed for access and modification. Let the method of delivery and distribution drive the planning methodology, not the reverse.
- Due to wireless technologies and the need for collaborative or support spaces, individual space is dwindling. In many organizations, 6'x8' is the largest workstation size.
- How much control the user has in modifying his or her workspace will affect the design. Variable privacy elements and mobile elements can give individual users choice. GSA research has found that user satisfaction has a direct correlation with the ability to control elements such as task lighting and desk height, which in turn has a direct correlation with job satisfaction.

Like all personal space, there is a trend toward smaller private offices. As well as there being fewer offices overall, the design has had to consider penetration of natural light to interior space, more efficient layouts, more democratic furnishings, visual communication, and displacement from the perimeter.

ITEM 9: PRIVATE OFFICES

- Penetration of natural light to interior space should figure prominently in the location and design of private offices. Providing fewer and/or smaller glazed offices are ways to accomplish this.
- Meeting space in private offices can be reduced to seating for one or two guest if smaller private offices are being considered. This may mean that four- to six-person meeting spaces need to be provided for common use elsewhere in the space.
- More efficient layouts can be accommodated by avoiding traditional freestanding desks and credenzas. Using millwork, workwalls or more systems-based furnishings can provide increased utility.
- As status distinctions between offices and workstations decrease, furnishings may need to be more democratic. Consider solutions that can accommodate both workstations and offices with the same kit of parts. Another advantage of modularity is that private offices can be easily changed into meeting space, and vice versa, with minimum disruption to enclosing partitions.
- Accessories create a more human centered environment. They are typically smaller in scale and are tangible objects, such as plants, picture frames, or collectables.

Watch for This!

TRADITIONAL OFFICE FURNITURE MAY NOT BE THE MOST EFFICIENT

Client X had traditionally styled mahogany desks and credenzas. While traditional in styling, the quality was extremely low and the furnishings did not maximize the potential of the space. Switching to free standing systems components maximized worksurfaces and increased storage. In addition, the new furniture was less ostentatious, less likely to look dated, cost conscious, and provided a more professional image. Furniture, at least in the federal office, should be beautifully designed to serve the people's work rather than individual egos.

Millwork, such as built-in cabinetry, is a great way to keep potentially messy things looking ordered, neat and hidden from view. Areas such a copy rooms, pantries, built-in credenza units and reception desks require a methodical approach to storage, equipment and layout spaces. It is important to verify all dimensions, programmatic requirements and power carefully, as changes later can be very costly and disruptive. Plastic laminate, wood, or stone finishes as countertops are most common.

ITEM 10: MILLWORK

- Never specify veneers, either wood or plastic laminate, near or adjacent to water sources. Solid materials (except wood) are more appropriate because they usually will not de-laminate, expand, or stain when exposed to water.
- Avoid heavily textured laminates or super glossy finished laminates on horizontal surfaces
- Provide upper cabinets only if they are required. Cabinet shelves higher than six feet are undesirable, sub-optimal, and may pose a hazard.
- To save resources and costs, don't take millwork storage units all the way to the underside of the ceiling. Six feet is the maximum height of the top shelf. Often times, these areas are out of reach for storage and are not used effectively. It is best to create a fascia to align with cabinet faces if desired.
- It is valid to assess if the function of an item can be supported successfully through a piece of furniture vs. custom millwork.
- Be generous to custom millwork areas that support equipment. Although it is a great design objective to custom-fit equipment into millwork, it is critical to consider the impact of future change. For example, if pantry millwork is designed to have a tight fit around a coffee maker, what happens if the equipment changes in a couple of years? It would be wise to provide some breathing space for change.

Watch for This!

DOUBLE CHECK REQUIREMENTS

Client X requested a very large pantry area for their new office space. They were accustomed to their existing pantry, which was a large open social space full of bar stools, café tables and video gaming areas. The client felt that this pantry offered a good benchmark for their storage needs. When the designer reviewed the space she found that the client was only using one of eight available draw ers and only three of the available fifteen cabinets. Everything else was completely empty. Always double check the client's requirements. Break rooms should be designed to be a comfortable place where people might actually want to take a break. Windows are a highly desirable element of suc cessfully designed break rooms.

Providing the extra human touch with art and accessories can make or break a design. They should be an integral component to the overall design concept and image. Art can be very subjective, so it is important to have clear direction on the message and intent of is application. It is best to work with an art consultant if possible. Otherwise use a design professional. Accessories should be used in small doses and in select locations. Consider establishing an art program which spotlights local artists' work.

ITEM 11: ART AND ACCESSORIES

- Create careful moments for art. Place art at the end of long corridors and vistas. It is also effective to place art in areas where contemplation can occur, such as elevator lobbies and reception areas.
- Avoid using posters, replicas and non-authentic art pieces. Think of art as an investment that reaffirms an interest in cultural value. Some federal agencies display artwork by the public.
- It is important to not over-saturate the design with an abundance of art and accessories. Less is more should be the approach. Be selective in the quality, quantity and location of these items.
- Art doesn't always have to be a static image hung on a blank wall. Alternate forms of art can be very effective, such as sculpture, ceramics, special furniture pieces and video / installation art.
- Accessories need specific and set locations. If they are movable, without a designated location, they will wander and be placed anywhere.
- Select appropriate and specific accessories. Make sure they have a function and specific utility. Avoid sentimental, home-made, residential or fussy accessories such as throw pillows, candle holders, dried floral arrangements or bric-a-brac.
- Awards, plaques, and other symbols of accomplishment should not be confused with art. Despite the sentiment, these are typically not attractive and highly variable in nature. Consider a single spot to display these items en masse rather than spread them throughout the office.
- No floral arrangements should be fake. Plants should be used to enhance a space and improve air quality, not just fill a void in the reception area.

Watch for This!

DON'T LEAVE ART SELECTION TO THE OFFICE MANAGER

Client X, a prominent news organization, formed an internal committee to locate and purchase art for their new facilities, which included a state of the art newsroom. While there was a healthy bud get for technology and design, the art budget was reduced by eliminating a reputable art con sultant. For the sleek, modern, efficient facility, the commit tee selected a ceramic parrot decorated with real feathers on a perch to hang over the news desk. It had been sculpted by the cousin of the arts com mittee head. A consultant was called the next day.

Equipment, appliances and technology are critical components to the success of an office. These items need to be integrated into the overall work flow and design sequence of the space. Location, creating access, specifying and integrating the equipment is a critical part of the overall office design process. Computers, printers, fax machines, copiers, coffee makers, dishwashers, icemakers, and refrigerators all require specific power/data access, wire management, surfaces and/or enclosures to function effectively.

ITEM 12: EQUIPMENT

- Prepare for change. It is important to provide locations for power and data in locations that might become equipment locations in the future.
- Equipment contributes to the visual aesthetic and character of the space. Select equipment that is visually attractive. In the same area, such as a pantry, all the appliances should be of similar finish and aesthetic character.
- Conceal ugly equipment. Not all equipment is created equal, so it is important to find ways to conceal less attractive or bulky equipment. Copy machines, for example, are noisy and emit fumes. They should be located out of open work spaces in alcoves or separate rooms if possible.
- Create a logical flow and sequence in areas that are equipment intensive. In a pantry area, walk through the sequence of how an individual uses the space. For example, locate the dishwasher adjacent to the sink, refrigerator adjacent to open counter space and coffee machines close to refrigerators. Also, ensure all items which open in a specific direction are not counter intuitive to this sequential flow.
- Almost all literature for office furniture shows computers but not the mass of cables and cords that go with them. Analyze how access to power and data as well as wire management is achieved.
- Computer monitors on articulated arms free up work surface and are more adjustable. Depending on work type, even two or more monitors on articulated arms allow different programs to be open at once. This allows greater train of thought when dealing with complex issues that require different programs.

Watch for This!

TECHNOLOGY HAPPENS

Client X requested a media center to be integrated into the design of the reception area of their new office space. Though the designer advised against it, the client demanded a built in solution to house the technol ogy. A spectacular custom wood wall was created that integrated all required equip ment into custom sized niches. Six months later, the custom wall had to be re designed to accommodate replacement equipment with different dimen sions. Never build permanence around that which is most likely to become obsolete.

WORLD CLASS WORKPLACE SCORECARD: A TOOL FOR IMPROVING WORKSPACE

GSA's WorkPlace Program is built upon the core belief that space matters. Why? Because space influences behavior, including business behavior and that ultimately affects an organization's performance. It is also built on the importance of measurement as a tool of management. For instance, post occupancy evaluations are a key component of the Requirements Development Process. To that end, the World Class Workplace Scorecard is a tool developed by the General Services Administration (GSA) to assist organizations in benchmarking the effectiveness of their workspace by examining major characteristics that are critical to providing high-performance, world-class workspace. Through a simple scorecard approach, anyone familiar with the facility can rate the space in the following categories:

- Planning and Design Process: Integrated requirements development and design process, Balanced Scorecard measures.
- Hallmarks of the Productive Workplace

  Equitable: Space according to work types, processes; access to light and views, addressing privacy issues.

  Sustainable: Indoor air quality, lighting, acoustics, amenities, contaminant mitigation.

  Flexible: Ease of furniture reconfiguration, meeting room configurations, alternative work settings, utility distribution, and mobile technology.

  Comfortable: User adaptability, temperature and ventilation control, fixtures and equipment.

  Connectable: Voice and data system access, configuration, and capacity.

Reliable: System reliability, operations and maintenance program, user guidance and training.

Identifiable: Access, way-finding, image, brand, and color.

- LEED for Commercial Interior Standards (LEED CI): Level of compliance with LEED certification requirements.
- Building Characteristics: Historic renovation, ceiling heights, daylighting, furniture procurement, location, LEED-rated building, and the presence of operable windows which can affect the space in ways not measured by the factors noted above.
- Design Process Characteristics: User survey, work settings match work styles, occupant satisfaction to yield better result and greater occupant buy-in.

Points are assigned for compliance with items in these categories to determine a final score that provides a quick snapshot of how your workspace measures up to world-class standards. This does not guarantee that your space is best suited to your organization's operations (the GSA Requirements Development Process (RDP) which has been developed and which will be rolled out in FY 2009 can help with that). However, it does indicate how the workspace is performing in providing high-performance office space. It also allows a large organization to compare various workspace facilities and determine where to best spend their improvement funds.

GSA can offer suggestions for improvement which may raise the score cost effectively. Contact Kevin Kelly, AIA, Director of the Center for Workplace Management at 202 253-2042

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